

Karan Gurazada

kgurazad@utexas.edu • github.com/kgurazad • linkedin.com/in/karan-gurazada-5116601b1/

Education

The University of Texas at Austin — Class of 2025

- Bachelor's of Science in Computer Science
- Honors Programs: Turing Scholar, Dean's Scholar

Leigh High School, San Jose, CA — Class of 2021

- Valedictorian, National Merit Scholarship
- Organizations: Coding Club (Co-President), Cybersecurity Club (Co-President)

Stanford Online High School, Redwood City, CA — Class of 2021

- Advanced courses: Data Structures and Algorithms, Multivariable Calculus, Linear Algebra, Differential Equations, Real and Complex Analysis, Quantum Computing

Computer Science Experience and Projects

- Languages: Java, Python, JavaScript, R, C++, Elixir, Shell, Perl, OpenQASM
- Libraries: node.js, express.js, MongoDB, flask, SQL, Electron, numpy, dplyr, Discord.js, Jetty
- Systems: Linux systems design

NeuHope, Inc. — Software Engineer Intern (San Jose, CA)

- Wrote server code and helped build user interface for Google Home and Alexa apps
- Connected patients with doctors, facilitated their recovery, provided additional support and guidance through app
- Stack: node.js, express.js, AWS Lightsail, Google Home, Alexa

Ising

- Simulates Ising model for ferromagnetism graphically
- Used Metropolis algorithm: calculate Boltzmann factor to find probability of each dipole flipping, advance the system by discrete time amounts
- Stack: Java, Swing

Buzzinga

- Simulates a Science Bowl buzzer on local network
- Free replacement for physical buzzer intended for low-income schools
- Stack: node.js, Electron

Research Papers

- "An Analysis of Quantum Mechanics using Real, Quaternion, and Octonion Probability Amplitudes"
- "A Review of the OpenQASM Quantum Assembly Language"